Amendments to the Claims

Please amend Claims 2, 5, 7-9, 14-16, 20, 25, and 36. Please cancel Claims 13, 17-18, 24, 28-29, 31, 33, and 35. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1.   (Cancelled)

2.   (Currently Amended) The method according to Claim [[13]] 14 wherein the communications include at least one source address in a message.

3.   (Original) The method according to Claim 2 wherein the source address includes an IP address.

4.   (Original) The method according to Claim 2 wherein a unique identification number is included in the message.

5.   (Currently Amended) The method according to Claim [[13]] 14 wherein monitoring includes distinguishing between communications affected by and not affected by network address translation.

6.   (Original) The method according to Claim 5 wherein distinguishing includes comparing an apparent source address of a message against an actual source address provided in the message.

7.   (Currently Amended) The method according to Claim [[13]] 14 further comprising assessing a range of network addresses behind the translating device.

8.   (Currently Amended) The method according to Claim [[13]] 14 further comprising assessing a range of public network addresses associated with the translating device.

9.   (Currently Amended) The method according to Claim [[13]] 14 further comprising distinguishing between active and passive clients.

10.   (Original) The method according to Claim 9 further including directing a message from a passive client to an active client.

11.   (Original) The method according to Claim 9 further including, from a processor beyond the translating device, causing a message to a passive client to be redirected to an active client, the active client responsively communicating with the processor beyond the translating device.

12.   (Cancelled)

13.   (Cancelled)

14.   (Currently Amended) The method according to Claim 13 further including A method of determining a network topology induced by network address translation, comprising:

           initiating communications, from a server behind a translating device, which effect the network address translation;

           monitoring the communications beyond the translating device to infer partitioning of servers behind the translating device into equivalence sets relative to the network topology induced by the network address translation, maintaining at least one translated address set, and comparing apparent message source addresses with addresses in the at least one translated address set; and

           merging translated address sets in response to determining that multiple apparent source addresses in distinct translated address sets correspond to the same actual source address.

15.   (Currently Amended) The method according to Claim [[13]] 14 further including assessing whether the source address is behind a known address translation device.

16.   (Currently Amended) The method according to Claim [[13]] 14 further comprising providing a timeout mechanism for removing an address from a translated address set.

17-19. (Cancelled)

20.   (Currently Amended) The apparatus according to Claim [[24]] 25 wherein the messages received include at least one source address in the message.

21.   (Original) The apparatus according to Claim 20 wherein the processor routine compares an apparent source address of a message against an actual source address provided in the message.

22.   (Original) The apparatus according to Claim 20 further including at least one translated address set, the source address being stored in the translated address set.

23-24. (Cancelled)

25.   (Currently Amended) ~~The apparatus according to Claim 24 wherein~~ Apparatus to be located beyond a network address translation device for determining a topology of a network in the presence of network address translation, comprising:

        a processor coupled to a network interface for receiving communication from a network device effecting network address translation and further coupled to memory;

        a processor routine operating on the processor, the processor routine to infer partitioning of servers behind a network address translation device into equivalence sets relative to the network topology induced by the network address translation and to store a database of translated address sets in the memory; and

        a database manager to compare apparent message source addresses with addresses stored in the database of translated address sets, ~~the database manager provides~~ and to

provide a timeout mechanism for removing translated addresses from the translated address sets in the database.

26. (Previously Presented) Apparatus to be located behind a network address translation device for providing communications used to determine a topology of a network in the presence of network address translation, comprising:

a processor behind a network address translation device coupled to a network interface and to memory, the processor initiating communications to a server beyond the network address translation device to effect network address translation;

a processor routine operating on said processor, said processor routine providing the actual network address of the processor in a message of the communications unaffected by the network address translation; and

a processor routine storing a database of translated address sets in the memory.

27. (Original) The apparatus according to Claim 26 wherein said processor issues communications in response to receiving a communication from behind the network address translation device.

28-35. (Cancelled)

36. (Currently Amended) ~~The method according to Claim 35 further including~~ In a network device beyond a network address translation device, a method for determining a topology of a network in the presence of network address translation, the method comprising:

receiving communication messages from a network device effecting network address translation;

inferring partitioning of servers behind a network address translation device into equivalence sets relative to the network topology induced by the network address translation;

storing a database of translated address sets;

comparing apparent message source addresses with addresses stored in the
database of translated address sets; and

removing translated addresses from the translated address sets in the database
after exceeding a timeout duration.

37.   (Previously Presented) In a network device located behind a network address translation
device, a method for providing communications used to determine a topology of a
network in the presence of network address translation, the method comprising:

initiating communications to a server beyond a network address translation device
to effect network address translation;

providing the actual network address of a processor, behind the network address
translation device, in a message of the communications unaffected by the network
address translation; and

storing a database of translated address sets in the memory.

38.   (Original) The method according to Claim 37 further including issuing communications
in response to receiving a communication from behind the network address translation
device.